

09/879,838

1. (CURRENTLY AMENDED) A method for instrumenting object-oriented virtual-machine-executable software comprised of class files containing bytecode including instructions, each class file being the software including one or more objects, each object being defined by a class and each class being associated with a class-hierarchy location and having a corresponding class name, the method comprising the steps of:

(a) identifying a class included in the software as a target class wherein the target class is at least one target class included within the software, the at least one target class being associated with a first class-hierarchy location and with a first class name;

(b) instrumenting the target class by one of or each target class, adding instrumentation to the software according to at least one of the following steps:

(i) creating a new instrumented class separate from the target class, adding instrumentation to the new instrumented class, and assigning the new instrumented class to a class-hierarchy location adjacent to and above the first class-hierarchy location of the target class, whereby the instructions of the target class remain in an original, unmodified form; and

(ii) creating a new instrumented class separate from the target class, adding instrumentation to the new instrumented class, and assigning the new instrumented class to a class-hierarchy location adjacent to and below the first class-hierarchy location of the target class, assigning the first class name to the new instrumented class and assigning a second class name to the target class, whereby the instructions of the target class remain in the original, unmodified form; and

(iii) creating an instrumented class of the target class by adding instrumentation to the target class without modifying bytecode the instructions within the target class and retaining the first class name for the new instrumented class, whereby the target class becomes the instrumented class and the instructions of the target class remain in the original, unmodified form; and

(c) causing a virtual machine to process the class having the first class name as the target class the class assigned the first class name.

2. (CURRENTLY AMENDED) The method of claim 1 including the following by the steps of: